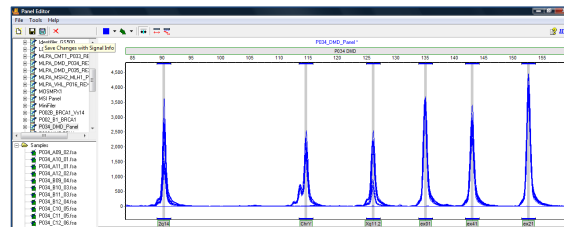
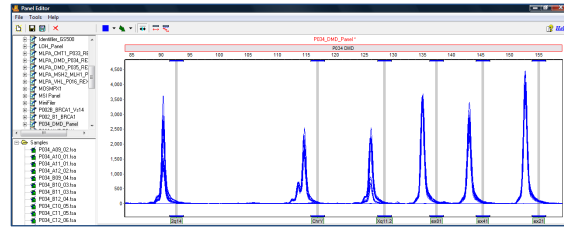


## Adjusting Panels in GeneMarker

It is common for panel alignment to be shifted due to variations in genetic analyzers or run conditions (such as temperature, injection time). Markers or bins can be manually aligned to the allele ladder using the shift key and left mouse button. Once a panel has been adjusted to fit the output of a specific genetic analyzer, the panel should be saved with the signal information. The combination of the panel bins and signal information provides GeneMarker's pattern recognition algorithm with the data necessary to use major and minor auto panel adjust icons to align the panel for projects from future runs on that same analyzer. If more than one genetic analyzer is used, a separate panel for each genetic analyzer should be saved with signal information, for example: panelname\_ABI3100, panelname\_ABI3130, panelname\_CEQ8000.

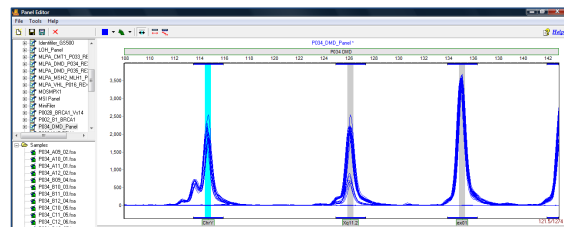
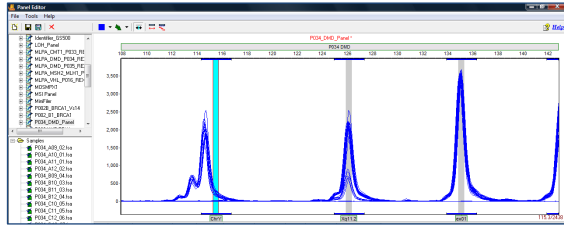
### Align all of the bins within a marker

1. Hold down the shift key
2. At the same time place the mouse over the gray marker name bar at the top of the electropherogram and hold down the left-mouse button
3. The marker rectangle will be outlined in red and the panel name will be in red font when the adjust feature is active
4. Drag the marker to align the bins with the peaks of the allelic ladder
5. Save the panel with signal information (the turquoise save icon) to enable the major panel adjust feature to work in future projects




### Align an individual bin

1. Select the gray vertical bar of the bin with the mouse – the bar will turn blue
2. Hold down the shift key and left-click on the gray, vertical bar for the bin
3. The vertical bar will be outlined in red and the panel name will be in red font
4. Use the mouse to drag the gray vertical bar to the center of the peak
5. Save the signal information with the panel to enable the auto adjust icons to function with future projects run on the same genetic analyzer



### Major and minor Auto-panel adjust

1. Major panel adjustment icon should be used with a panel that was previously saved with signal information from the genetic analyzer if the data run is shifted 1-5 base pairs from alignment.
2. Click on the auto-major panel adjustment icon 
3. The panel is automatically adjusted for this project
4. Minor panel adjustment icon aligns the center of the Bin to the center of the nearest peak (within one basepair of the Bin). 